

## Impact of Unwantedness and Family Size on Child Health and Preventive and Curative Care in Developing Countries

*Based on the report "A Multicountry Analysis of the Impact of the Reduction of Unwantedness and Family Size on Child Health" by Eric R. Jensen and Dennis A. Ahlburg, January 1999. The research was commissioned under POLICY's Global Policy Research Program.*

### Background

Governments in developing countries have promoted family planning as a means of achieving small families. Families with fewer children are perceived to be better able to provide each child with sufficient support and resources for healthy development. Previous studies addressing the question of whether children fare better in smaller families have focused on the relationships between number of children and education and number of children and health.

This study focuses on one of the most important justifications for investing in family planning: improved health of children. Those who argue that the number, spacing, and timing of children influence subsequent child health assume that families have relatively fixed resources. If a couple has more children, or if children come early in a marriage or are closely spaced, the fixed resources of the couple must be divided among more family members, potentially resulting in poorer health outcomes. However, resources are not necessarily fixed: parents may reduce their consumption in favor of their children; older siblings may work and increase family resources; larger kin groups can share the cost of child-rearing so the total number of children does not impact the health of an individual child; health and education may be publicly provided so that number of children is unimportant; and finally, only some children will be affected because parents can influence resource allocation to the advantage of more favored children (often males).

Of great policy interest is whether families reallocate resources (or other means within the family) in response to unwanted births to minimize the

morbidity and mortality impacts of such births. If parents are experiencing unwanted births and those children as well as other children in the family are subsequently at higher risk of morbidity and mortality, the policy prescription is clear—parents should be assisted in avoiding unwanted pregnancies. In addition, increased emphasis should be placed on providing preventive health services and health education for parents to make it possible for all children to thrive.

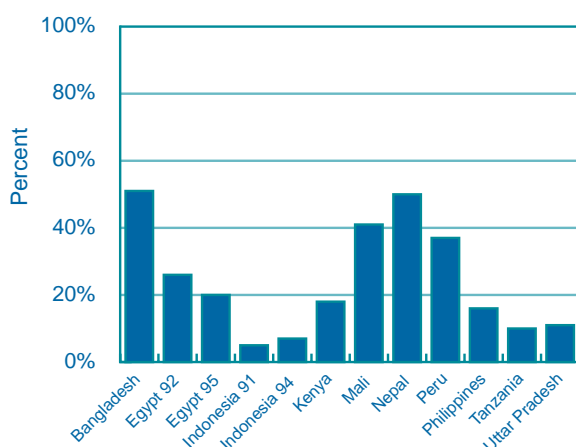
### Methodology

This study used regression models to estimate the impact of unwantedness and number of children on several measures of child health. Data came from 11 Demographic and Health Surveys (DHS)—Bangladesh (1993), Egypt (1992 and 1995), Indonesia (1991 and 1994), and the most recent surveys (as of early 1998) from Kenya, Mali, Nepal, Peru, the Philippines, and Tanzania—in addition to data from the 1992/93 National Family Health Survey for the Indian state of Uttar Pradesh. Countries were chosen on the basis of geographic diversity, sample size, stage of economic and demographic development, degree of public provision of health services, and differences in child-rearing practices. The unit of observation is children born five years preceding the survey, for whom detailed health information is provided by their mothers. Each birth has individual, family, and community characteristics associated with it. Some community-level characteristics, such as the mean prevalence of disease, are calculated from individual-level data, and some, such as clinic accessibility, come from community-level surveys where available.

## Findings

The proportion of unwanted births (that is, those cases where the mother reports the child was not desired at conception or at some later time) is very low in Indonesia, Tanzania, and Uttar Pradesh; and very high in Bangladesh, Mali, Nepal, and Peru. Figure 1 presents mean unwantedness for the data sets.

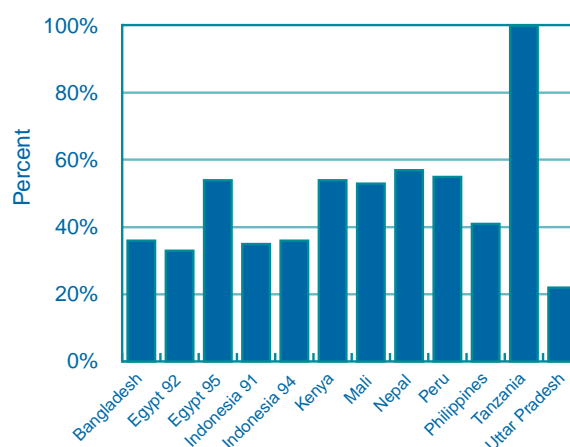
**Figure 1. Mean Unwantedness**



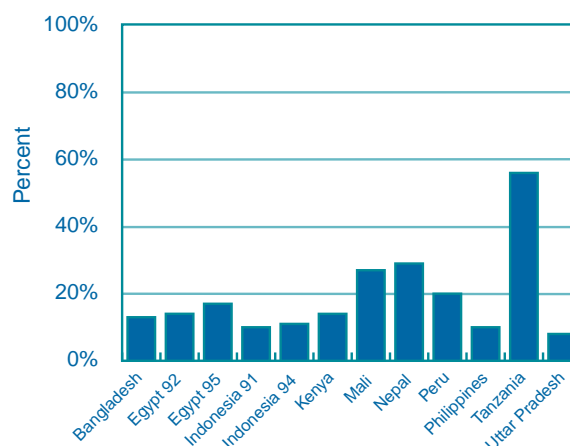
Acute respiratory infections (ARI), together with diarrhea, account for a large share of child morbidity and mortality. Fever or cough are very common symptoms of illness in young children and are referred to as ARIs in this study, with the understanding that this set of symptoms is consistent with a wide range of other possible diseases. With only one exception, Uttar Pradesh, one-third or more of children aged 0-4 were reported to have had one

or more ARI symptoms in the two weeks preceding the survey. In every setting, diarrhea prevalence was lower than ARI prevalence, yet was still high enough that children would reasonably be expected to have multiple diarrhea episodes in a year. Figures 2 and 3 present mean levels of illness for the countries studied.

**Figure 2. ARI Prevalence**



**Figure 3. Diarrhea Prevalence**



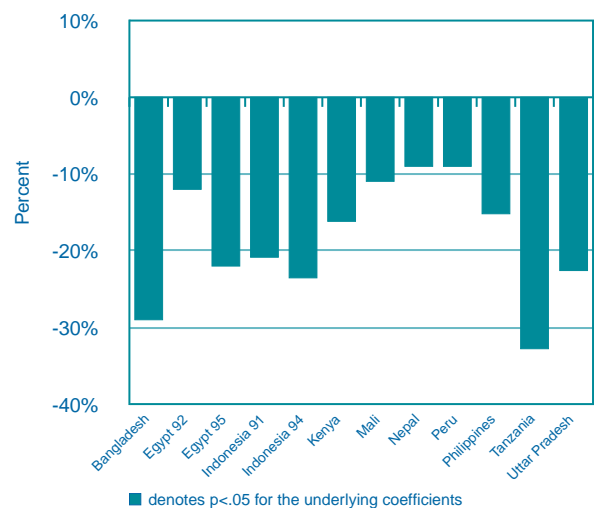
In a given household, resources are constrained. Our model of household decision making is as follows: parents may or may not effectively anticipate resource constraints in the process of childbearing. If they anticipate well, then the number of children *per se* might have little, if any, effect on the welfare of children in the family. However, if parents do not plan a birth and instead experience unwanted fertility, the outcome will likely carry consequences for children in the family. Consequently, this study included regression models of the impacts of want-

edness and number of children on the probability of child illness, controlling for wealth, other family characteristics, and local incidence of disease.

**Childhood Illness**

As Figure 4 shows, wantedness has a significant and sizable impact on ARI morbidity. The bars in the chart represent the reduction in the probability that a wanted child, compared to an otherwise identical unwanted child, will display a fever or cough (as a proportion of the underlying probability of illness). In no country is this reduction less than 10 percent; in some it is closer to 30 percent. And in every case, the regression coefficient is statistically significant. These are very large reductions in morbidity. One explanation is that the birth of unwanted

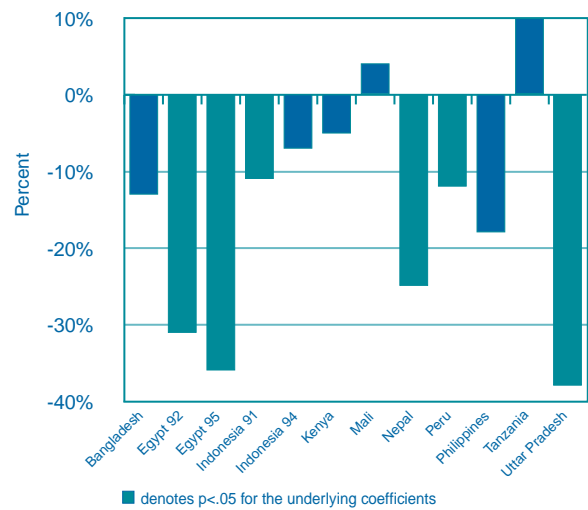
**Figure 4. Impact of Child Wantedness on ARI Morbidity**



children stretches household resources to the point that nutrition suffers, increasing the vulnerability of unwanted children to disease. Since the data only focus on young children, it is not possible to ascertain whether the siblings of unwanted children also suffer consequences. However, to the extent that parents are unwilling or unable to concentrate the negative impacts of the birth solely on the unwanted child, other children in the family will also feel the consequences of unwantedness.

Figure 5 presents the impacts of wantedness on diarrhea morbidity, again controlling for the other characteristics. Here, the favorable impacts of wantedness are often present, but they are much more variable than in the case of ARI symptoms. The effects

**Figure 5. Impact of Child Wantedness on Diarrhea Morbidity**



are statistically significant and considerably large in half of the data sets. In the other settings, however, there appears to be little impact of wantedness on diarrhea morbidity. As was the case with ARI symptoms, these figures are for the unwanted birth alone and, therefore, may understate the true impact on morbidity within the family if the consequences of an unwanted birth ripple through the family.

The study also found that children from larger families became ill less often than those from smaller families. Perhaps women with more experience raising children are more able to shield them from disease and this overcomes any effects of unwantedness.

**Treatment**

Treatments for both ARI and diarrhea are common, but certainly far from universal in most settings. Like the initial occurrence of illness, treatment of ill children is likely to depend on available family resources. In general, wanted children were just as likely as unwanted children to receive treatment for ARIs or diarrhea once ill. However, children from larger families were less likely to receive treatment for their illnesses than were children from smaller families. In seven of 11 countries, the number of children had a statistically significant negative effect on treatment for ARIs and in two of 10 countries for diarrhea. The difference in treatment may reflect the relatively high cost of drugs to treat respiratory infections, as compared to easily obtained oral rehydration salts for diarrhea. In countries where the findings were statistically significant, having one

more sibling decreased the likelihood of receiving treatment between 2 and 8 percent.

These results are consistent with a sort of “benign neglect,” where, following an unwanted birth, parents may be forced to reallocate existing resources such as food to the disadvantage of the unwanted child and perhaps its siblings. Once a child is sick, however, social pressure may cause equal treatment of all children in the family, whether wanted or not. Resource constraints mean that children from larger families receive less treatment than children in smaller families.

### ***Preventive Care***

We also examined the impacts of wantedness and number of children on preventive care, using the number of vaccinations provided to children as the measure of preventive care. Typically, neither wantedness nor number of children played important roles in determining the number of vaccinations, and almost all children were up-to-date on vaccinations. However, in three countries, the vaccination system appeared not to work as well, with all children in those countries averaging only about half the required vaccinations. In two countries (Bangladesh and Mali), wanted children

averaged more than twice as many vaccinations as unwanted children, and in the third (Nepal), wanted children received over 50 percent more vaccinations. So, where the program may be experiencing difficulties and parental resources need to be expended, unwanted children receive fewer vaccinations.

### ***Policy Implications***

The findings of this research provide strong support for the notion that unwanted children suffer health consequences. Wanted children are from 10 percent to 30 percent less likely to display symptoms of acute respiratory infection and as much as 40 percent less likely to have diarrhea. These are very large differences in morbidity. Children from larger families are likely to receive less treatment for their illnesses than are children from smaller families. In countries where the vaccination level is low, wanted children receive more vaccinations than unwanted children. These findings provide strong evidence in favor of measures to help parents attain their family size goals. The findings also provide evidence that governments should strengthen vaccination programs to ensure 100 percent coverage and promote medical treatment for all children in case of illness.